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ABSTRACT

A study investigated the effects on reading comprehension of guided imagery instruction before reading. Subjects, 25 third-grade student volunteers from a small Montana community, were given a vocabulary pretest to determine the effect of background knowledge. They were then randomly assigned to one of three treatment groups--read only, guided imagery, or non-related imagery--for three sessions. After reading the narrative text, the students completed a main idea statement and answered comprehension questions. Results indicated no significant differences among the three treatment groups. Results also indicated that the order of treatment made no apparent difference in the literal and interpretive level test scores. In addition, there appeared to be no difference in the type of treatment related to the distribution of main idea types. (Statistical tables and a figure are included; a data table, the vocabulary pretest, the guided imagery procedure and treatments, the posttest, and extensive references are appended.) (NKA)

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AN INVESTIGATION OF THE EFFECTS OF GUIDED IMAGERY, BEFORE READING, ON COMPREHENSION OF STORIES IN A NARRATIVE TEXT

A Thesis

Presented to

the Faculty of the Graduate School

Eastern Montana College

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

in Education

by

Nancy Jane O'Hara

July 1987

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As members of the Examining Committee of Nancy Jane O'Hara we certify that we have read the Thesis entitled An Investigation of the Effects of Guided Imagery, Before Reading, on Comprehension of Stories in a Narrative Text and have participated in an examination of the candidate. It is our recommendation that the Thesis be accepted as fulfilling the thesis requirement for the degree of Master of Education with an option in Reading.

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ABSTRACT

O'Hara, Nancy, J., An Investigation of the Effects of Guided Imagery, Before Reading, on Comprehension of Stories in a Narrative Text. Unpublished Master's Thesis, Eastern Montana College, 1987.

The purpose of the study was to examine the effects of Guided Imagery, before reading, on comprehension of stories in a narrative text.

Subjects were 25 volunteers who were in the third grade and attended a first through sixth grade school with a population of 331-353 students. The subjects were randomly placed in three treatment groups. Nine treatments which lasted from 25 to 40 minute were conducted by the researcher: 3 treatments of each; read only, Guided Imagery, and non-related imagery. A vocabulary pre-test was given for two reasons: 1) to determine if the three groups possessed similar background knowledge, and 2) to test the effect of background knowledge on reading comprehension in each treatment. To investigate qualitative data the subjects were instructed to complete a main idea statement. Cunningham & Moore's (1984) classification of responses were used to compare results. There were 10 post-test questions about the literal meaning of each story read by the subjects, and 5 questions about

interpretations drawn from each of the stories read. Mean difference results for each group for general comprehension were compared.

A two way ANOVA was applied to determine whether the means were significantly different at the probability level $p < .05$. For comparison of each dependent variable; literal, interpretive, and completion of a main idea statement, the ANOVA indicated the treatment groups were similar ($N = 25$, $df = 23$, $F = 2.24$, $p = .106$). The probability of interaction effects ($p = .5250$) among the three treatment groups suggested that the order of treatments made no apparent difference in the literal and interpretative test scores. The results indicate support for the null hypotheses. However, the findings of this study could have been affected and limited by a number of factors. Therefore, further investigation in this area of research needs to be conducted.

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CHAPTER I

INTRODUCTION

Comprehension during independent reading is the ultimate goal of reading instruction. Readers who have difficulty comprehending tend not to read independently. Attainment of these competencies, and the processes that support them, are major focus points of today's educators and researchers (Walker & Mohr, 1985). Reading is a process in which the reader constructs meaning using information from the author's textual cues in conjunction with his/her own "meaning models" to infer the author's intended meaning. Comprehension embodies the complexity of reading. Smith (1975) states that to learn information processing the brain functions actively to seek, select, store, retrieve, and utilize information about the world. To retrieve and utilize information the reader builds a frame of reference for new ideas that will be encountered in the new material. Vacca (1986) contends that:

> A frame of reference is an anchor point; it reflects the schema or cognitive structure students need to relate new information to existing knowledge. Students need to recognize how new material "fits" into the conceptual frameworks that they already have. (p.104)

Reading professionals also agree that "reading is the process in which information from text and the knowledge possessed by the reader act together to produce meaning" (Anderson, 1985, p.8). Methodological considerations can be derived from views of the interaction between text cues and prior knowledge during reading. This can be accomplished through the use of memory support techniques which assess and activate schema (McNeil, 1984, p. 25). Such methods are strategies designed to effect reader-text transactions. The problem is how should teachers lead students to orchestrate the reading process using prior knowledge?

Purpose of the Study

In the process of reading, the reader needs to actively interact with the text to reconstruct the meaning of the author. This is obtained through predictions which are based upon the reader's prior knowledge (Goodman 1976; Smith, 1978). Johnston (1983) addresses this by stating that comprehension requires "a previously formed knowledge structure which already contains the major relationships. This is conceived of as a "slot-filling" activity"(p.7). While reading, the reader fills the slots with relevant information to understand text. Therefore, "the more background

knowledge the reader possesses, the more likely it is that the reader knows the relevant words, and the more likely she or he will be able to make appropriate inferences while reading, and to build appropriate models of meaning." (Johnston, 1983. p.14). As the student reads, s/he processes previously formed knowledge structures which already exist; only the specific details need to be filled in the slot. In the case where there is not such a structure (or the reader fails to use it) the student must rely on background knowledge to infer and fill the slot. Therefore, background knowledge determines the interpretations made from text.

> Researchers refer to prior knowledge as knowledge structure, scripts, frame, or schemata. Schemata are frameworks for interrelating different elements of information about a topic. Comprehending a message involves constructing a correspondence between an existing schema and the elements in the message. That is, the schema is a framework of expectations. It allows the reader to take what is directly perceivable and to make inferences about its unseen features. (McNeil,1984, p.3).

He further states "comprehension can be improved by deep processing of text material or the embellishing of what is read." (p. 44) This is achieved by

elaboration. McNeil defines elaboration as "an embellishment of text; readers accomplish it by drawing upon their prior knowledge, making inferences, paraphrasing the text in their own language, and relating it to their own purposes" (p.4). Elaborating what is read requires the reader to actively integrate new information with existing knowledge therefore, greater storage and use of the new material will result. He suggests:

> Elaboration is effective because it activates learners' relevant schemata, thereby allowing the new information to be incorporated into their sets of past experiences (p.44).

Text is elaborated by manipulating images suggested by the text and related to prior experiences. When readers picture the persons, events, and the logical relationships among the ideas expressed in the text then deeper processing of text occurs. Thus, images represent the readers own past experiences and is meshed with the new information from the text.

Paivio (1971) proposes that experiences make up our prior knowledge. The connections we make between our experiences, and schemata, can be coded in two forms: images and words. Readers code information by constructing images that represent their experiences as well as naming these experiences. When used to improve

comprehension Guided Imagery activates background knowledge prior to reading by using sensory images which are related to a particular situation to create a personal understanding of the text (Walker, 1986). Linden & Wittrock (1981) hypothesized that students construct more text-relevant generations and, as a result, comprehend text better when teaching proceeds from imaginal to verbal generative activities rather than from verbal to imaginal generative activities. Further more, Peters, Levin, McGivern, & Pressley (1985) suggests there are two different types of visual imagery instruction, 1) representational which refers to the translation of verbally presented text into a directly corresponding visual image, and 2) transformational which refers to a visual recoding of text information with the help of pictorial mnemonic devices. He proposes transformational imagery instruction is effective for readers who are reading difficult-to-remember passages. If this is true, then instruction in Guided Imagery will facilitate imagers.

Parrish and Cook (1983) along with other researchers, contend that there is a scarcity of research conducted on Guided Imagery and reading performance and that additional data are needed to ascertain the age level at which mental imagery increases reading comprehension. Paivio (1971) states

that now there is sufficient data for educators to be optimistic that imaging activity is effective. However, more research needs to be conducted in which three concerns are investigated: 1) the variety of effects of imagery to determine, and describe, how well imagery is induced, 2) to explore the nature and role of spontaneous imaging by students as well as other reading experiences, and 3) to investigate the effect instruction has on reading comprehension.

It is the purpose of this study to investigate the effects of Guided Imagery, before reading, on comprehension. Therefore, the following hypotheses have been derived.

Hypotheses

1. There will be no significant differences in the mean scores among imagery, non-related imagery, and read only treatment groups for comprehension questions based on narrative text selections.

2. There will be no significant difference in the mean scores among literal level multiple choice story grammar questions related to treatment passages.

3. There will be no significant difference in the mean scores among interpretive multiple choice story grammar questions related to treatment passages.

4. There will be no significant difference among main idea statement responses related to treatment passages.

Assumptions and Limitations

The following assumptions were made:

1. Comprehension is affected by instructional procedures.

2. The results of a main idea statement, interpretive and literal level, multiple choice questions are sufficiently valid and reliable in representing comprehension.

The study was subject to the following limitations:

1. The sample of convenience was restricted to 25 volunteers who were in the third grade and attended an elementary school of grades first through sixth. Sex ratio of students was not controlled for. The findings of this study cannot be generalized to other third graders.

2. Treatment was limited to nine separate 25-40 minute lessons, depending upon length of guided imagery, story length, and reading rate.

3. Vocabulary pre-test and comprehension post-test were limited to narrative content.

Definitions

1. Guided Imagery is an instructional technique used by a teacher to build a visualized model of part of the story before reading and evaluating the text.

2. Reading Comprehension is the readers process of using the cues provided by the author and the readers prior knowledge to infer the author's intended meaning.

3. Comprehension Instruction is when the student is guided through the process of predicting what is going to be communicated (Goodman, 1976; Smith, 1978), selecting and sorting information, and revising predictions based on reader-based processing and text-based processing. (Walker, 1985).

4. Comprehension processing is when the reader makes inferences, activates appropriate concepts, relates new information to old, creates picture images, and reduces the information in a text to a main idea (McNeil, 1984, p. 3).

5. Memory support technique is a teaching strategy used by a teacher for both assessing and activating schema. (McNeil, 1984, p. 25)

Independent Variable

The independent variables in this study were: 1) related Guided Imagery, a portion of the story was told using sensory images related to the story line to increase active comprehension and activate background knowledge about situations and characters in the story, 2) non-related guided imagery, a portion of a story that was similar to the conflict of the story to be read, but other wise not related to the text was told using sensory images, 3) Read only, the subjects received a brief introduction, but did not receive Guided Imagery before reading.

Dependent Variable

The dependent variables in this study were a main idea statement, literal questions, and interpretive questions.

Extraneous Variables

1. Some of the subjects may not have been able to image.
2. There many have been too many distractions from the

class next door and the recess bell sounding.

3. Hawthorne effect - The subjects were aware of being observed.
4. Evaluation apprehension - The subjects were aware that their scores were important which may have caused them to excel in all treatment conditions.

Research Questions

1. Does Guided Imagery, before reading, affect comprehension during reading?
2. How should teachers lead students in order to orchestrate the reading process using prior knowledge?

Significance of the Study

Findings of this study and others (Pressley, 1976; Sadoski, 1983; 1985) suggest that imagery can enhance comprehension processing for younger readers. However, there is limited investigation of imagery as a comprehension strategy in instructional materials. Rarely is Guided Imagery presented as a strategy for facilitating the reading comprehension process in instructional aides for teachers (Gambrell, 1986). Therefore, this study is significant in that it is investigating a relatively new field of research in comprehension instruction.

Plan of Study

	Story 1	Story 2	Story 3
G1	Treatment 3	Treatment 2	Treatment 1
G2	Treatment 1	Treatment 3	Treatment 2
G3	Treatment 2	Treatment 1	Treatment 3

CHAPTER II

REVIEW OF THE LITERATURE

. The following background for this study contains a review of criticisms and research of "Classroom Practices", "Before Reading Instruction," "Comprehension Interference," "How Children Image", "Imagery Instruction," and "Imagery Training" as an alternative teaching technique.

Classroom Practices

Durkin (1978) conducted a study which consisted of 39 classrooms in central Illinois. Under observation were grades three through six. These levels explicitly teach reading comprehension. The primary reason for the study was to learn whether elementary classroom teachers provide comprehension instruction and, if so, what amount of time is allotted to it.

A portion of her study focused on fourth grade subjects from 24 classrooms in 13 different school systems. Six of these 24 were third/fourth combination classrooms. Class size ranged from 11 to 32, with a mean of 22.7. All of the classes were taught by women; seven of the teachers had aides. Administrators chose their best faculty members and teachers to be observed, each knowing when they would be observed. In 8

schools, interclass groups were used during the reading period, the remaining 16 had self-contained rooms. One class used interclass groups for social studies. Reading observation was for 4,469 minutes; Social Studies, for 2,775 minutes. The amount of time spent during the reading period on study skills, activities concerned with comprehension, and comprehension instruction, defined as something the teacher does/says to help children acquire reading ability, consisted of less than one percent. Comprehension application, defined as something the teacher does/says to assess whether previous instruction helped children to understand the meaning of connected text not used in that instruction, did not occur. This may not have been needed since the teachers followed the manual, did neither more or less than what was instructed to be covered, then shifted to another lesson without explanation. Teacher's questions dominated 17.65 percent of the time. This is in the category of comprehension assessment, defined as something the teacher does/says to learn whether what was read was comprehended. Teacher posed questions were usually literal, taken from the teacher manual, and concerned only with right or wrong answers.

The basal manuals were rarely used for anything except questions. Manuals were used to prepare

students to read 5.53 percent of the time. Prior to reading brief attention to new vocabulary words, followed by 2 to 3 questions that were never written, were asked. Because the words and concepts were not written neither the children, nor the teacher, could refer to them before, during, or after they read (Durkin, 1978). Therefore, the questions asked before reading were not repeated when the story was discussed.

Durkin (1978) concluded that dittos and worksheets were the prime task. Teachers spent 14.35 percent of instructional time giving assignments. As the student worked on assignments the teacher helped with mechanics and directions which served to cause problems for the children because: 1) numerous assignments were given at the same time, 2) the preparation for doing them was insufficient, or 3) the directions were unclear. The teachers did not help in an instructional manner.

The data showed that neglect of comprehension instruction was not the result of the teachers being too busy teaching other things. Thirty-one percent of their time was spent doing non-instructional activities (maintaining discipline, explaining nonacademic matters, correcting papers, distributing materials, and transition). Spending time correcting math papers was the largest single contributor.

Mohr's summary (1984) included the following observations:

> Durkin's study which did not vary from grade to grade or school to school, consisted of the following findings: 1) practically no comprehension instruction transpired - comprehension assessment was commonly carried on through interrogation; 2) there was not any systematic occurence of other kinds of reading instruction - comprehension instruction was not omitted because of instruction in phonics, structural analysis, or word meanings; 3) teacher's were frequently assignment-givers; using their time giving, completing, and checking assignments, and a significant amount of time went to activities categorized as transition and non-instructional; 4) none of the teachers used the Social Studies period to improve children's comprehension abilities, but instead used the time to cover content and with having children master facts.

Until Durkin's study was undertaken, it had been assumed that at least a portion of class time was used for a sequence like the following: instruction, application, practice. With the data collected it is revealed that teachers are assignment givers, checkers, and interrogators.

Dittos and worksheets run the programs leaving the children to "busy work." Facilitation of comprehension cannot go overlooked when developing an instructional program in reading.

Before Reading Instruction That Facilitates Comprehension

Based on the assumption that learning is a constructive process rather than a reproductive process, many researchers advocate strategies which encourage information gain by relating new information to the students background knowledge. Theorized by Ausubel (1963, 1968) is the advanced organizer, a directed strategies for activating background knowledge. His theory is that the organizer will "bridge the gap between what the reader already knows and what the reader needs to know before he/she can meaningfully learn the task at hand" (p. 148).

Luiten (1980) suggests that less capable students benefit the most from advance organizers. He examined 135 studies and concluded most advance organizer treatment groups tended to perform better than control groups. However, the impact of aural and visual organizers varied with age level of students, and the effect of advance organizers tended to increase over time. He also concluded that these strategies are more

beneficial to older and more able learners than younger and less able readers.

Duell (1974) and Maier (1980) in their studies taught students objectives before reading as prereading intervention. Maier found that giving students with learning disabilities a reason for reading increased their learning. Duell found that students who were given detailed purposes before reading learned targeted, unimportant information better than students who were just told they would take a multi-choice test after reading.

Interference with Comprehension

The hypothesis that reader's knowledge that is activated prior to reading affects what is eventually comprehended has been well researched and documented in the last decade. (Anderson, Reynolds, Schallert & Goetz, 1977; Bransford & Johnson, 1972, Pearson, Hansen & Gordon, 1979). Tierney and Cunningham (1984) stress the importance of building and activating background knowledge prior to reading. However, there has been recent research which suggests that readers have difficulty changing their preconceived notion about the topic (Alvermann, Smith & Readence, 1985).

Alvermann, Smith & Readence (1985) examined the effect of prior knowledge activation on average

reader's comprehension of compatible and incompatible text. Their study consisted of fifty-two sixth-grade students who were assigned randomly to one of two treatment groups. Students were informed that the researcher was interested in finding out what topics they know the most and least about. One month prior to the study, all subjects completed the knowledge domain pretests.

Students read and studied particular passages. They were given 4 minutes to complete the reading, afterwards they engaged in an unscrambling of words activity to control for short term memory effects. Subjects were then required to complete the written free recall protocal. Ten minutes later the experimenter stopped the groups and passed out a multiple-choice test. Finally, subjects answered questions on the post-reading questionnaire.

Johnson's (1970) procedure for scoring was used. Measures of written free recall and multiple-choice tests were the dependent variables. Post-session questionnaires were administered. Subjects in the non-activating group recalled more targeted and non-targeted idea units, $F(1,49)=30.07$, $p < .001$, and $F(1,49)=12.53$, $p < .001$, respectively, than did subjects in the activating group. Non-activating subjects also answered more of the targeted multiple-choice questions

correctly than did activating subjects, $F(1,49)=5.51$, $p < .05$. Non-activating subjects did not perform significantly better than activating subjects, $F(1,49)=2.64$, $p < .25$.

Results supported the notion that prior knowledge may interfere with reading comprehension rather than facilitate it. Subjects who activated what they believed to be relevant background knowledge allowed their previous knowledge and experiences to override the text information.

How Children Image

It has been suggested that a reader may visualize from the vantage point of an eyewitness or character of the story to aid comprehension (Tierney and Pearson, 1983). The value of this suggestion has been limited to examining the effects of this strategy to constrained text situations. The studies done in this area (Dunham & Levin, 1979; Gambrell, 1982) suggest that imaging may not facilitate learning from text for very young readers. It is proposed that students below the third grade may not be able to image on command. The following review will investigate the modes of imagery facilitation related to reading beginning with concrete objects to instill imaging (Wolff & Levin,

1972), and Sadoski's (1983, 1985) studies concerning self reported imaging.

In 1972, Wolff and Levin investigated the child's use of motor activity to form imagery. Subjects were forty children from kindergarten and forty children from third grade. Thirty two common small toys were paired together. Children were divided into four groups: 1) control, where children were instructed to remember which toys went together; 2) image, where the subjects where told to form a mental image of the two toys playing together; 3) E-manipulate, where the examiner manipulated the toys to interact in a prescribed manner; and 4) S-manipulate, where the subjects were told to make the toys play together. After all the pairs were presented the subjects were tested by having them match response toys to the stimulus toys.

The results concluded that manipulation of the objects by either the examiner or the subject had a significant effect on the responses from the final matching task. Both the kindergarten and third grade levels, with a possibility of 16 correct had a mean score of approximately 5 for the control groups. For the E-manipulate group the scores increased to 13 for the kindergarten group and 14 for the third grade group. The mean increased to 10 for kindergarten and

12 for the third grade in the S-Manipulate group. The mean increased to 6 for the imagery group at the kindergarten level and 11 for the third grade group. The researchers theorize that the largest increase was with the E-manipulate group because the examiner manipulated the toys in the most significant ways possible. They hypothesized to generate and use imagery the children must be approximately seven years old, which is the end of the preoperational stage. Consequently, the instruction to image was not meaningful for the kindergarten group. This suggestion that imagery instruction does not facilitate younger children is an important proposal to further investigation in imagery instruction.

Sadoski's studies (1983,1985) investigated naturally occurring images. The studies relied on student's self reporting of images. In the first study 48 fifth grade students orally read a story which contained three illustrations and an interesting climax. After reading the students completed three comprehension tasks directly related to the story; a retelling, an oral reading cloze test, and a multiple choice question test comprised of items demonstrated to be story dependent. After the retelling task, the subjects were asked to report any memorable images from the story. These reports were used to identify

subjects who reported an image of the story's climax and those who did not. Findings indicated that reported climax imagery was related to deeper levels of processing on reading comprehension measures that do not rely on verbal reasoning processes. The results provide support for several theories of the functional use of imagery in reading.

Sadoski's second study was a reexamination of the previous study. Two changes were made; 1) third and fourth grade subjects were used and 2) the text was unillustrated. Like the first study, the image reported most often was the climactic event of the story, with about half the students reporting one or more images that were associated directly with that event.

It was concluded that both the replication and extension aspects of the study support the contention that imagery can serve as a comprehension strategy, as a "mental peg" for memory storage, retrieval, and redintigration. He contends there is a relationship between imagery and text comprehension variables and can be interpreted systematically in light of contemporary theories of reading, imagery, and memory. This study gives evidence that children do image with or without text that is illustrated.

Imaging Instruction

It has been suggested that readers naturally image while reading but may not always use it. Studies done in the area of imaging while reading include Kulhavy & Swenson (1975) and Clark (1984). Also research has been conducted on teaching active imaging after reading (Pressley (1976) and Gambrell (1986). The following is a review of these studies.

Kulhavy and Swenson (1975) tested fifth and sixth grade students to determine if imagery effects comprehension of a story one week after it was read. One hundred and nineteen children were given a twenty paragraph story. Subjects in the experimental group were given booklets with "form a mental picture of these events before turning the page" typed at the bottom of each page. Randomized test questions were either verbatim or paraphrase. One week later half of the children were tested again. Subjects from the control group were tested at both the immediate and delay sessions.

The results showed that the subjects remembered more if they tried to image while reading. In the image delayed test group the mean test for the verbatim test was 8.01 where as the control group scores were 8.94. With paraphrase image delay test group the mean was 10.93 whereas the control group mean score was 8.04.

Children did better in the image paraphrase immediate test group where the mean was 12.95.

Pressley's study (1976) was similar to Kulhavy and Swenson in that there were no manipulatives. Imagery training was given to 43 third grade children. The control group consisted of the same. In the study, children were presented with six training sentences and two paragraphs and told "that a good way to remember things is to make up pictures in your heads of the sentences." The subjects were shown slides as example of images of sentences. The children in the control group were instructed to do whatever they had to in order to remember the story.

All of the subjects were give a story about a border guard which was 950 words in length. Blank pages were provided in the text for the experimental group in which they were instructed to image when they got to the blank page. Comprehension was measured with 24 questions with 30 correct answers possible. Results showed that all reading ability levels (good, average, and poor) the experimental group had a mean of 18.55 correct answers versus 15.83 for the control group.

Pressley concluded, "Perhaps, the most accurate, least speculative summary of the results of the study reported here is that when groups of eight year old children are told to use mental imagery to facilitate

their memory of prose, are given practice at forming mental images and it is guaranteed that the subjects do not attempt to read and image at the same time, then 8 year old's memory of a very concrete, easily imaginable story can be improved by using mental imagery" (p.135).

In 1984 Clark focused on improving comprehension with six secondary learning disabled students. Four students were taught the visual imagery strategies followed by self questioning. The steps included: 1) read a sentence, 2) make an image - a picture in your mind, 3) describe your image, 4) evaluate your image for its completeness, 5) repeat these steps through out the text. Two other students were taught self questioning strategy first and then visual imagery, the material used for visual imagery were all determined to be concrete rather than abstract to facilitate imagery.

Results showed that the students mastered the strategies to criterion level of 85% comprehension in reading ability materials. She states' "Six replications of a multiple-baseline design demonstrated that improved performance did not occur until each strategy had been specifically taught. Analysis of the data indicates that implementation of one strategy does not affect performance on the other regardless of the order of instruction. The two strategies are

independent and each must be specifically taught." (p.148)

In a recent study Gambrell (1986) investigated one hundred twenty-four subjects from 5 public elementary schools in Maryland. The materials consisted of 3 high-imagery sentences, 2 high-imagery paragraphs, 4 short expository passages, and a 10-item probing instrument.

Subjects were assigned randomly to 1 of 2 treatment conditions: 1) mental imagery instructions, or 2) general instructions. Materials were consistent across the two conditions for the training session and the testing session. Each subject was told that they had been selected to serve as a consultant to help determine if the stories were comprehensible. All subjects read two passages, one containing explicit inconsistency, the other containing an implicit inconsistency. Before reading each passage subjects were reminded that they were to read the story to help determine. They were also asked if there was anything that was not clear or easy to understand about the story.

When subjects completed the silent reading of each passage a questionnaire consisting of 10 probes was given. If the subject identified the inconsistency the experimenter apologized for having poorly written

stories and thanked the child for helping to identify the problem with the story. After completion of the two passages each subject was briefly interviewed about strategy implementation with the question, "What did you do to understand what you read about pigeons and snakes?"

If the subject identified the inconsistency during, at the conclusion of silent reading, or in response to questions 1-3 credit was given for detecting the inconsistency without prompting. Icentification of the inconsistency in response to questions 4-6 resulted in credit for detecting the inconsistency during indirect confrontation. Identification of the inconsistency in response to questions 7-10 resulted in credit for detecting the inconsistency during direct confrontation. Non-detection score was given for failure to detect the inconsistency following the 10 probes.

The results of chi-square analysis revealed a statistically significant difference in reported strategy implementation between the imagery and general instruction groups, $X2 < (2, N=124=54.25, p < .001)$. In the mental imagery group 43 of the 62 subjects reported the use of mental imagery and 8 reported the use of rereading. In the general instructions group 37

subjects reported the use of rereading and 4 reported the use of mental imagery.

The findings of this study give evidence that imagery is of functional significance in problem-solving, particularly with respect to unfamiliar or novel situations.

In the review of limitation it is noted that children do not typically encounter text which contains blatant inconsistencies and the image-evoking quality of text varies considerably, thus, the possibility that the findings of this study are idiosyncratic to this data must be recognized (Clark, 1983).

Comprehension processing by young readers can be enhanced through the use of mental imagery. However, there is limited discussion of imagery as a comprehension technique prior to reading. There has been little research investigating the direct relationship between Guided Imagery prior to reading, and it is uncertain what age level mental imagery enhances reading comprehension.

Imagery Training

As early as 1968 Strang noted the importance of visual imagery. She states children who consistently use imagery in their reading have more meaningful and vivid experiences.

Levin & Hawkins (1974) conducted two experiments with elementary school children concerning the viability of visual imagery as a prose-learning process. In both studies it was found that visual imagery may be elicited more readily in listening tasks than in reading tasks.

Imagery training concerning prose-learning was researched by Lesgold, McCormick, & Golinkoff (1974). The training procedure emphasized close correspondence between passage content and the content of subject generated mental or physical pictures illustrating of the passage. During training children were taught to coordinate verbal and pictorial representations by having the subjects read passages, illustrate them with stick-figure cartoons, and using the illustrations as prompts in recalling passage content. There was also a control group in which subjects were instructed to read the same passages as were given the experimental subjects, but they answered multiple-choice questions about the passage instead of drawing cartoons.

The results indicated there was no significant differences between experimental and control groups on a standardized achievement test. It was concluded that there was no effect of imagery instruction on paraphrase prose recall performance without the training. There was an improvement in performance with

training and a prompt at the time of reading. Therefore, imagery instruction needs to be explicitly taught to be an effective memory support technique.

Miccinati (1982) conducted a study to explore the influence of a six-week imagery training program on the comprehension of 75 third and 75 sixth grade students. Two experimental groups met separately in three groups of six to ten students. The imagery training program consisted of auditory (listening, imaging, and recalling what was retained) and visual (reading, imaging, and recalling what was retained). The control group remained in their classroom and received no special training beyond their usual reading instruction.

Miccinati replicated Lesgold's et al., 1975 study, in that the imagery training groups received blank pages for students to draw stick figures of their images. Questions were asked for each passage heard and read.

Instruction and practice in imaging, illustrating descriptions of images, and responding to recall tasks did not significantly effect the comprehension of students when measured with a standardized achievement test. It was also suggested that "older students can successfully apply their own imagery strategies to prose learning whether they read well or not. In

addition, those students are able to express themselves verbally or in writing when reading is not required." (Miccinati, 1982, p. 199).

Walker (1985) suggests reading is an interactive process in which personal images (reader - based processing) and text process work simultaneously to create meaning. Guided Imagery is a technique for students who need to build a model of the whole story before reading and evaluating the text. She recommends that this technique be used for the imaginative reader to encourage personal identification with the text.

Parrish & Cook (1983) in their review of literature conclude: "There is a scarcity of research in this promising area. Guided imagery techniques indeed hold potential for improved reading performance of students and thus should be further investigated by quantitative, qualitative and applied research studies" (p. 133).

Summary

These studies are frameworks for the research being conducted today. What must be noted is that the explicit technique and the sequence of instruction have not been refined. Imagery instruction seems to enhance reading comprehension for a specific population;

readers with imagination, who are beyond and encounter unfamiliar text, or at the end of the preoperational stage. Consequently, imagery instruction may not be an effective technique for all readers.

CHAPTER III

DESIGN OF THE STUDY

Description of the Subjects

The subjects of the study were 25 third grade students from a small community in south central Montana and attend a school with a population of 331-353 students. The population is 99.5% caucasian with 18% qualifying for reduced or free lunch. Their socioeconomic level was typical of a working-class, semi-professional population. Subjects volunteered for the five week experimental study which took place at a first through sixth grade school during the month of May in 1987. Two weeks prior to the study the subjects were given a vocabulary pre-test which consisted of key concepts and words from the text to be used. The Scheffe'analysis (N = 25, df = 23, F = 2.24, p = .106) was .6710 showed that there was no significant difference in the three groups. Subjects were randomly assigned to three groups on the basis of drawing colored slips of paper (green, orange, pink). Each subject participated in treatment one related-guided imagery, treatment two - non-related guided imagery and treatment three - read only.

Data Collection Procedures

Pre - test

A vocabulary test consisting of words and concepts from the text to be used for treatment passages was given to all subjects for two reasons: 1) to determine if the three groups possessed similar background knowledge, and 2) to test the effect of background knowledge on reading comprehension in each treatment.

Instruction

During the three-week experiment, each group met Wednesday mornings at approximately the same time. Procedure time was chiefly determined by length of instruction and story length.

All groups were instructed by the researcher. Instruction for the read only group occurred by a teacher-directed purpose setting introduction to the text. The Guided Imagery groups received either a related imagery or a

non-related imagery. After the subjects read the text they completed a main idea statement and answering comprehension questions.

The researcher did not correct the pre-test or the post-test, but instead anonymous reviewers corrected all tests.

Instrumentation

The following is a description of the instruments used in this study.

Pre-test and Post-test Comprehension Questions

The instruments were designed by the researcher using the following criteria:

1) Pre-test — The pre-test followed Johnston's (1981) model for prior knowledge-vocabulary test. For each word there were four answers to choose among. The subjects were instructed to underline the best answer.

2) Comprehension post-test

The post-test followed Singer,H. & Donlan, D. (1982) model of story grammar structure (the questions were written in the same sequence as the story) for writing the schema-general multiple-choice questions. Further more, Herber's Model (1978) of Literal and Interpretive level questions were used, defined as: "At the literal level readers identify the important information. At the interpretive level readers perceive the relationships that exist in that information, conceptualizing the ideas formulated by those relationships" (Vacca, 1986, p.45).

3) Main idea

Subjects completed a main idea statement, "This story was mainly about _____", which was scored using Cunningham, J., Cunningham, M., Moore, D., & Moore, S. (1984) criteria for classification:

Gist	How the problem was solved
Interpretation	A summary of the possible or probable implicit contents of the story
Keyword	The main characters name or a word labeling the most important single concept in the story.
Selective/ Summary	A summary of the explicit contents of the story which was achieved by selecting and combining the most superordinate and important words and phrases (or synonyms).
Theme	A generalization about life, the world, or the universe that the passage as a whole develops, implies, or illustrates but is not a topic or keyword specific.
Topic	A phrase labeling the subject (not the main character) of a passage without revealing specific content from the passage.

Topic issue	Something that happens to the topic- a single word, term, or phrase labeling a conceptual context from the story.
Topic sentence	Something that happens to the main character. The sentence tells most completely what the story as a whole is about.
Other	A response that had nothing to do with the story read.

Instructional Materials

(for narrative materials)

Three different narrative stories were used in the study. The stories were taken from Scott, Foresman and Company (1985) basals, Level 6 (second grade). This level was chosen to insure that all subjects were reading above the reading level of the text. Fry's readability formula verified that all passages were at the second grade level. Each passage was typed in the same size print as the text without illustrations. Sadoski (1985) suggests that unillustrated stories invite more reader imagery (p.664). The passages were chosen to be no more than 356 words and no less than 337 words in length. On each Wednesday the same story

was used for treatment groups. Treatment varied by method of instruction.

Procedure

Pre-tests Two weeks prior to the study, in a self-contained classroom at West Elementary School, all subjects completed a vocabulary pre-test. The test was comprised of nineteen words from the stories to be used in the study. The words were chosen for meaning and context.

Treatment one (Related Guided Imagery) The groups were guided through separate reading selection, three with an imagery based on the selected text from Scott Foresman's second grade basal *Whistles and Dreams.* The subjects then read the story silently. (See Appendix C)

Treatment two (Unrelated Imagery)

After the groups were given a Guided Imagery that was unrelated to the text, the subjects silently read a story from Scott Foresman's second grade basal Whistles and Dreams. (See Appendix C)

Treatment III (Read only)

The groups silently read three separate reading selections taken from Whistles and Dreams. The subjects received a brief introduction of the story. (See Appendix C)

After reading each of the stories, subjects were instructed to complete the main idea statement and answer the multiple choice questions by underlining the best answer.

Posttest

There were 10 posttest questions about the literal meaning of each story read, and 5 questions about interpretations drawn from each of

the stories. The subject also completed a main idea statement.

Statistical design

The raw data were given statistical treatment to observe outcomes. In order to look at the effects of several dependent variables across multiple treatments; each subject receiving related Guided Imagery, non-related Guided Imagery, and read only treatments, a two way ANOVA was used to analyze the data for a repeated measures design. The ANOVA was also applied to determine whether the means for all three groups were significantly different at the probability level, $p < .05$, and to determine if there were any interaction effects among the three groups.

CHAPTER IV

FINDINGS OF THE STUDY

The purpose of this chapter is to present the findings of this study.

Presentation of results

Before each of the treatments were given, the subjects completed a pre-test of 19 vocabulary words drawn from each of the three stories. On the average, the students scored 17 correct answers. The pre-test was given for two reasons: 1) to determine if the three groups possessed similar background knowledge, and 2) to test the effect of background knowledge on reading comprehension in each treatment. (See Appendix - B)

TABLE 1.1

Frequency Distribution Based on Vocabulary Pre-test

	NUMBER CORRECT		FREQUENCY OF SCORES
S	(74%)	14	3
C	(79%)	15	0
O	(84%)	16	5
R	(89%)	17	9
E	(95%)	18	5
S	(100%)	19	3

Table 1.1 indicates that most of the third graders scored at or near the 89% with progressively fewer students achieving higher or lower scores. Therefore, a relatively normal distribution occured.

Figure 1.1

Frequency Polygon based on Vocabulary Pre-test

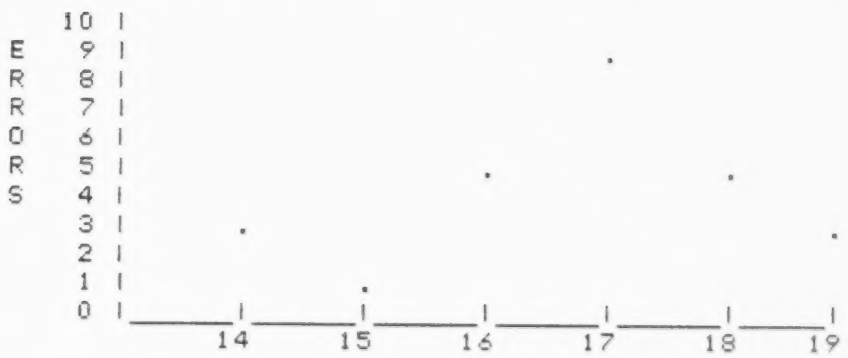

TABLE 1.2
MULTIPLE COMPARISONS: SCHEFFE'
Matrix of Probabilities

	1.	2.	3.
1.	1.000	0.702	0.986
2.	0.702	1.000	0.785
3.	0.986	0.785	1.000

MULTIPLE COMPARISONS: SCHEFFE'
Probability Level: < .05

Set 1:	16.50	17.00	17.13

There were 10 post-test questions about the literal meaning of each story read. Therefore, a perfect score would have been a 10. In general, each of the treatment groups correctly answered 8 of the 10 questions. The post-test also contained 5 questions about interpretations drawn from each of the stories read by the subjects. The subjects generally answered 3 to 4 of these questions correctly. For each dependent variable the means for each treatment group were similar. (See Appendix - D)

TABLE 1.3

Mean Scores of Pre-test and Post-test Questions

GROUPS	Literal	Interp.	Vocab.
Treatment I	8.60	4.20	16.88
Treatment II	7.84	3.48	16.88
Treatment III	8.32	3.44	16.88

Presentation and interpretation of analysis

The results of the two way ANOVA for comparisons between the three treatment groups were as follows, ($N = 25$, $df = 23$, $F = 2.24$, $p = .1062$) (see Appendix-A) Tested against the .05 level, no significant differences among the three treatments groups were indicated.

The order of treatment made no apparent difference in the literal and interpretive test scores ($p = .5250$). The results of a two way ANOVA indicated no statistically significant interaction effects. Subjects completed a main idea statement, "This story was mainly about _____", which was scored using Cunningham & Moore's (1984) criteria for classification in order to characterize the main idea responses. eight categories were possible:

Gist	How the problem was solved
Interpretation	A summary of the possible or probable implicit contents of the story
Key word	The main characters name or a word labeling the most important single concept in the story.
Selective/ Summary	A summary of the explicit contents of the story which was achieved by selecting and combining the most superordinate and important words and phrases (or synonyms).
Theme	A generalization about life, the world, or the universe that the passage as a whole develops,

	implies, or illustrates but is not a topic or key word specific.
Topic	A phrase labeling the subject(not the main character) of a passage without revealing specific content from the passage.
Topic issue	Something that happens to the topic- a single word, term, or phrase labeling a conceptual context from the story.
Topic sentence	Something that happens to the main character. The sentence tells most completely what the story as a whole is about.
Other	A response that had nothing to do with the story read

Three investigators independently categorized each protocol as fitting into the eight categories or "other". All discrepancies were resolved through consultation. (See Table 1.4)

TABLE 1.4

	TREATMENT I				TREATMENT II				TREATMENT III			
	S1	S2	S3	TOTAL	S1	S2	S3	TOTAL	S1	S2	S3	TOTAL
GIST	0	1	0	1	0	1	0	1	0	0	0	0
INTERPRETATION	0	3	0	3	1	0	0	1	0	0	0	0
KEYWORD	0	2	2	4	3	1	1	5	0	0	3	3
SELECTIVE SUMMARY	0	0	0	0	0	0	0	0	0	1	0	1
THEME	0	0	0	0	0	1	1	2	0	0	1	1
TOPIC	2	1	3	6	1	2	2	5	1	4	2	7
TOPIC ISSUE	4	2	2	8	2	1	1	4	4	2	1	7
TOPIC SENTENCE	2	0	1	3	2	2	1	5	3	1	2	6
OTHER	0	0	0	0	1	0	2	3	0	0	0	0

The results of the Chi Square for comparisons of the classification distribution among the three treatment groups were as follows, N = 75 X2 = 16.73, p = .403. The results indicate there was no significant difference in the classification of main idea statements due to the type of treatment.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS

Summary and Interpretation of the Investigation

The purpose of this study was to investigate the effect of Guided Imagery as an instructional technique on reading comprehension. Twenty-five subjects were randomly assigned to three groups. The counterbalanced design was used for three treatments; treatment one - Guided Imagery, treatment two - non-related Imagery, and treatment three - read only.

Two weeks prior to the study, the subjects were given a vocabulary pre-test which consisted of key concepts and words from the text to be used. The Scheffe' analysis was used to determine if the three groups possessed similar background knowledge. The results showed there was no significant difference .6710, therefore, there was no significant difference in the three groups. This test was also used to test statistical significance between the order of treatments. The results indicated that the order of treatments made no difference. (See Table 1.3)

Three hypotheses were formulated to investigate the mean score differences between the three groups. The results of the two way ANOVA for comparisons between the three treatment groups were as follows,

(N = 25, df = 23, F = 2.24, p = .1062). Tested against the .05 level, no significant differences between the three treatment groups were indicated.

The probability of interaction effects (p = .5250) among three treatment groups as determined by the two way ANOVA was also not statistically significant. Therefore, the order of treatments made no apparent difference in the literal and interpretive level test scores.

A fourth hypothesis was formulated to investigate the qualitative data using Cunningham and Moore (1984) classification scheme. There appears to be no difference in the type of treatment related to the distribution of main idea types. Subjects were moderately consistent in the responses they made which indicates the type of treatment made no difference in their strategy for completing the main idea statement.

In general, the findings of this study could have been affected and limited by a number of factors. The Hawthorne effect could have had a major effect on the performance by the subjects. In addition to the Hawthorne effect, there was limited instruction time. The subjects did not receive Guided Imagery training and treatments were limited to three, once a week, 25-40 minute session. There was a small sample of volunteer subjects and the subjects were limited to one

grade level. No teacher probing occurred, creating a totally self-directed activity unlike the teacher-directed activities to which the students were accustomed. Therefore, the task was novel and possibly affected the gain scores for the three groups equally.

To adjust for assurance of vocabulary recognition the passages were second grade level. Because the reading material was below most of the subjects reading level the comprehension questions may not have been a true indication of the treatment effects. Clark, Deshler, Schumaker, Alley, & Warner (1984) suggest visual imagery is a strategy to be used with materials written at or above the readers reading ability.

Clearly, a great deal of additional research needs to be done to adequately understand the effects of Guided Imagery on reading comprehension and establish who may benefit from the technique. This researcher recommends that future investigators use larger sample groups and that a control group be used for the purpose of base line data. The control group would receive the read only treatment and would not receive the Guided Imagery treatments. This would allow the researcher to draw more conclusions concerning the effects of Imagery, non-Imagery, and non-related Imagery techniques.

Based on the extensive review of related research and the finding of this study, it is the opinion of this researcher that Guided Imagery may enhance comprehension processing for younger readers. However, further research on Guided Imagery before reading needs to be conducted. There is a possibility that this memory support system may improve comprehension, which offers hope for the attainment of the goal of reader comprehension during independent reading.

APPENDIX A

ANOVA

ROW VARIANCE	N	MEAN	STANDARD DEVIATION
1:	75	9.89	5.44
2:	75	9.40	5.84
3:	75	9.55	5.77

COLUMN VARIANCE		N	MEAN	STANDARD DEVIATION
Literal	1:	75	8.25	1.62
Interp.	2:	75	3.71	1.37
Vocab.	3:	75	16.88	1.40

APPENDIX B

VOCABULARY PRE-TEST

Underline the best answer

1. REWARD
   - a job
   - a sound
   - a prize
   - a club

2. WELCOME
   - a greeting
   - a safe place
   - a birthday
   - to say goodbye

3. SURPRISED
   - shining
   - silly
   - unexpected
   - surely

4. NEIGHBOR
   - lives next to you
   - lives away from you
   - lives under you
   - lives around you

5. ENJOY
   - to be happy
   - to clean
   - to hide
   - to be unhappy

6. MAGIC
   - to be practical
   - to be dark
   - a hat
   - a secret charm

7. CLEANER
   - grease
   - clear
   - removes dirt
   - sticky

8. MESSY
   - fun
   - game
   - pretty
   - untidy

9. NOTE
   - a short letter
   - a book
   - a pencil
   - a poem

10. VIEW
   - two people
   - to see
   - a person
   - a house

11. BLOCKS
   - plastic
   - round
   - cookie
   - a toy

12. APARTMENT
   - a building
   - going away from
   - beside
   - rooms to live in

13. CANDLES
   - paper
   - dark
   - light
   - soft

14. BUSY
   - to watch
   - a ride
   - to working
   - a quilt

15. STEPS
   - feet
   - shoes
   - stairs
   - higher

16. FLUFFY
   - big
   - round
   - soft
   - flat

17. TRICK
   - to run
   - to play
   - to find
   - to fool

18 PLAN
   - to look
   - to think about
   - to jump
   - to ride in

19. TACKED

to place

to jump

to run

to sit

APPENDIX C

GUIDED IMAGERY PROCEDURES

T1 "THE WELCOME NOTE"

The researcher will conduct a Guided Imagery that pertains to the story in the following manner:

She will say: "I want you to relax, shut your eyes, stretch your arms and legs, flex your fingers and your toes, roll your head around, and get as comfortable as possible. Now I want you to listen to the sounds of the room. Turn the sounds into the sounds of a Spring day. Feel the warmth of the sun on your face and body.

Your name is Yoshi. You are roller skating down the sidewalk. Feel your skates bouncing as you roll over the cracks in the sidewalk. Feel the wind blowing through your hair. It's the first day on your new street. You think about your old street. The cat next door had just had kittens. At last you were going to have a kitten of your

own. But now you have moved and you don't have a kitten.

All of a sudden you see a note tacked to a tree. You stop to read it, it says "Lost- fluffy white cat-reward for finding her. If you find her, take her to 123 Pine Street for the reward," signed Mrs. Hope.

After you have read the note you skate around the block. You see a street sign with Pine on it, and you remember that Pine is the name of the street in the note. And you know that Mrs. Hope lives at 123.

You decide to find out more about the cat and the reward in the note, so you skate up to the house. Mrs. Hope welcomes you. You tell Mrs. Hope you have read the note and you ask, "Did you find the cat? Did you give the reward?" "Not yet", said Mrs. Hope, "why don't you look for Fluffy? Maybe you will find her and get the reward."

As your skating down the street you come to a tree, and near the tree you see a little house. You look in the door and see a white cat, just like the one in Mrs. Hope's note. But are you surprised! There you see kittens too.

You quickly skate back to Mrs. Hope's and you call to her, "Come see Fluffy. She is in a safe place, and she has kittens!"

The researcher then says, "I want you to finish the story in your mind and when you are finished open your eyes a return to this room."

After completing the Guided Imagery the students will be given "The Welcome Note" and the researcher will say:

1. "Read this story to see what happens. When you have finished reading the story turn your papers over."

2. After everyone is finished the researcher will collect the stories and explain the post test in the following way:

   Think about "The Welcome Note" and answer the first question by writing your answer on the blank lines. The story is mainly about_____. When you have completed the first question answer the rest of the questions by underlining the best answer. If you need help with a word raise your hand.

After completing the questions the students will staple their color coded name tag to the answer sheets and write their name on each answer sheet.

T2 "THE WELCOME NOTE"

The researcher will conduct a Guided Imagery that does not pertain to the story in the following manner:

She will say; "I want you to relax, shut your eyes, stretch your arms and legs, flex your fingers and toes, roll your head around, and get as comfortable as possible. Now I want you to listen to the sounds of the room. Turn the sounds into the sounds of a cold day. Feel the brisk wind blowing against your face. Your hands are cold and begin to hurt.

Your name is Rita. You are running down the street. Your on your way to Marsha's house. You feel the wind blowing through your hair.

All of a sudden your brother Tony jumps out in front of you and yells, "Were is my snake?" Have you seen it today?" Mom is going to kill me if it's lost in the house!" " Will you help me find it?"

"Yuk! Tony. You know I hate that snake!" "But I'll help you anyway."

Tony goes in the house to look. You wander around the neighborhood.

The researcher then says, "I want you to finish this story in your mind and when you have finished I want you to open your eyes and return to this room.

After completing the Guided Imagery the students will be given "The Welcome Note" and the researcher will say:

1. "Read this story to find out what happens. When you have finished reading the story turn your paper over."

2. After everyone is finished the researcher will collect the stories and explain the post test in the following way:

   Think about "The Welcome Note" and answer the first question by writing your answer on the blank lines. The story is mainly about_____. When you have completed the first question answer the rest of the questions

by underlining the best answer. If need help with a word, raise your hand.

After completing the questions the students will staple their color coded name tag to the answer sheets and write their name on each answer sheet.

TREATMENT III "THE WELCOME NOTE"

The researcher will say;

1. "What is the title of this story?"
2. "What do you think this story will be about?"
3. "This is a story about Yoshi. Read to find out what happens."
4. "When you have finished reading the story turn your paper over."
5. After everyone is finished the researcher will collect the stories and explain the post test in the following way:

   Think about "The Welcome Note" and answer the first question by writing your answer on the blank lines. The story is mainly about_____. When you have completed the first question, answer the following questions by underlining the best answer. If you need help with a word, raise your hand.

After completing the questions the students will staple their color coded name tag to the answer sheets and write their name on each answer sheet.

T1 "RYAN'S PLAN"

The researcher will conduct a Guided Imagery that pertains to the story in the following manner:

> She will say; "I want you to relax, shut your eyes, stretch your arms and legs, flex your fingers and toes, roll your head, and get as comfortable as possible. Now I want you to listen to the sounds of the room. Turn the sounds into the sounds of a Spring day. Feel the warmth of the sun on your face and body.
>
> Your name is Ryan. You live with your mom and dad, and you have a little brother Matt. You and Matt share a bedroom. As you enter your room you see that once again your side of the bedroom is clean and your toys are picked up, because you do not enjoy a messy room. But Matt's side is messy because he enjoys it that way.
>
> Your dad sometimes asks you to clean up Matt's side and to put his toys away. You don't like this.

You decide you need to find a way to get Matt to pick up his own toys.

You remember that Matt likes magic tricks. You decide to show Matt that picking up toys is a magic trick.

The next day, just before bedtime, you start your plan by telling Matt about Magic Cleaner. You tell Matt, "Magic Cleaner does magic by picking up toys fast!" Matt says to you "I want to do true magic just like Magic Cleaner."

Just before Matt goes to sleep you slip into a tall hat and a black cape and you turn into "Magic Cleaner". You are holding a flashlight and slowly move toward Matt. Matt sits up and wonders what this floating person can be. You say " My name is Magic Cleaner. I enjoy cleaning. You can be a magic cleaner too. This ring is yours. It's magic. When you put it on, zap! You will be a magic cleaner."

The researcher then says; "I want you to finish the story in your mind and when you are finished open your eyes and return to this room.

After completing the Guided Imagery the students will be given "Ryan's Plan" and the researcher will say:

1. "Read this story to find out what happens. When you have finished reading the story turn your paper over."

2. After everyone is finished the researcher will collect the stories and explain the post test in the following way:

   Think about "Ryan's Plan" and answer the first question by writing your answer on the blank lines. The story is mainly about_____. When you have completed number one, answer the rest of the questions by underlining the best answers. If you need help with a word, raise your hand.

After completing the questions the students will staple their color coded name tag to the answer sheets and write their name on each answer sheet.

T2 RYAN'S PLAN

The researcher will conduct a Guided Imagery that does not pertain to the story in the following manner:

She will say: "I want you to relax, shut your eyes, stretch your arms and legs, flex your fingers and

toes, roll your head, and get as comfortable as possible. Now I want you to listen to the sounds of the room. Turn the sounds into the sounds of a Fall day. Feel the warmth of the sun on your face and the breeze blowing through your jacket. See the leaves falling from the trees.

Your name is Stacy. You and your best friend Chris have been hired by your next door neighbor to rake the leaves in her yard. Chris say to you, "I'll rake the front and you rake the back." "Yes, that sounds fair" you reply, and you both go to work.

At first the raking is easy and fun, but after an hour you begin to get tired and your hands are hurting. You wish you had a pop and could rest but Chris is almost done and you still have lots of leaves to rake. Then Mrs. Stevens comes out with a glass of lemonade and calls, "Stacy-Chris, come and have a break. You are doing a great job. I would like you to pull the weeds along the fence in the back yard too."

Chris smiles at you and you know what he is thinking - the back yard is yours. You think to yourself, "this isn't fair, Chris is almost done and you'll both get the same amount of money. How can I get Chris to help with the back yard?"

All of a sudden you remember Mom is going to rent movies this afternoon. Maybe if you ask Chris to come over after the raking is done you can get him to pull weeds. So you say to Chris, "If you pull the weeds so I can get the leaves raked you can come over and watch movies at my house this afternoon."

Chris isn't smiling anymore. He thinks for a long time, then he says, well okay, but . . .

The researcher then says; "I want you to finish the story in your mind and when you are finished open your eyes and return to this room."

After completing the Guided Imagery the students will be given "Ryan's Plan" and the researcher will say:

1. "Read this story to find out what happens. When you have finished reading the story turn your paper over."

2. After everyone is finished the researcher will collect the stories and explain the post test in the following way:

   Think about "Ryan's Plan" and answer the first question by writing your answer on the blank lines. The story is mainly about_____.

When you have completed number one, answer the rest of the questions by underlining the best answers. If you need help with a word, raise your hand.

After completing the questions the students will staple their color coded name tag to the answer sheet, and write their name on each answer sheet.

TREATMENT III "RYAN'S PLAN"

The researcher will say;

1. "What is the title of this story?"
2. "What do you think this story will be about?"
3. "This is a story about Ryan. Read to find out what happens."
4. "When you have finished reading the story turn your paper over."
5. After everyone is finished the researcher will collect the stories and explain the post test in the following way:

Think about "Ryan's Plan" and answer the first question by writing your answer on the blank lines. The story is mainly about_____."
When you have completed number one, answer the rest of the questions by underlining the best answer. If you need help with a word, raise your hand.

After completing the questions the students will staple their color coded name tag to the answer sheet and write their name on each answer sheet.

T1 "THE NEW GAME"

The researcher will conduct a Guided Imagery that pertains to the story in the following manner:

The researcher will say; "I want you to relax, shut your eyes, stretch your arms and legs, flex your fingers and toes, roll your head, and get as comfortable as possible. Now I want you to listen to the sounds of the room. Turn the sounds into the sounds of a Spring day. Feel the warmth of the sun on your face and body. See the green grass and new flowers blooming.

Your name is Kim. You live with your mom, dad and your sister May in an apartment three floors up. You are looking out your living room window, down below you watch people walking below, you see the cars crossing back and forth. You want to play "I Spy", a fun game in which you have someone guess what you see. You want May to play but she is playing with her blocks. At last she comes over to the window and says, "Now I can play. I'll go first. I spy something red." But before you could

answer Mom said, "You know we are going to eat at the Drake's house on the first floor. If you are dressed, you can play for a while before we go."

May said, "Yes, we are dressed."

You think to yourself, "We had better play quickly or we will have to leave before we get to play at all. So you say, "May, could the red thing be a man's coat?"

But before May could say, "No," all the lights went out.

Father says, "All the lights are out! I wonder what is going on? I wonder if the Drakes still want us to come to eat?" Father stumbles to the phone and calls the Drakes. When he is finished talking he says, "The Drakes still what us to come down, everything is ready and they have lots of candles."

Mother got the one and only candle out of the drawer and you all begin to go down the stairs. Its dark and exciting. You have many steps to go.

Then all of a sudden the candle went out. Dad says, "I haven't any matches, we are stuck here.

Mom says, "Everyone sit down and we'll wait for the lights to come back on."

You begin to think about the game you were going to play and you wish you were having fun now. You get a new idea, and you say, "Since we can not play I Spy, I have a new game we can play. Let's play I Hear.

The researcher then will say, "I want you to finish the story in your mind and when you are finished open your eyes and return to this room.

After completing the Guided Imagery the students will be given "The New Game" and the researcher will say:

1. "Read this story to find out what happens. When you have finished reading the story turn your paper over."

2. After everyone is finished the researcher will collect the stories and explain the post test in the following way:

   Think about "The New Game" and answer the first question by writing your answer on the blank lines. The story is mainly about _____. When you have completed number one, answer the rest of the questions by underlining the best

answers. If you need help with a word, raise your hand.

After completing the questions the students will staple their color coded name tag to the answer sheet and write their name on each answer sheet.

T2 "THE NEW GAME"

The researcher will conduct a Guided Imagery that does not pertain to the story in the following manner:

She says; "I want you to relax, shut your eyes, stretch your arms and legs, flex your fingers and toes, roll your head, and get as comfortable as possible. Now I want you to listen to the sounds of the room. Turn the sounds into a Summer day. Feel the hot breeze rustling your hair, the sun upon your face and body. Your feet are hot and swollen.

Your name is Kasey. You wander down to the stream and sit down. The water looks inviting so you slip off your shoes and dip your feet into the bouncing stream. The water feels refreshing. Your relaxed and start to wish Billy was finished with his chores. As soon as he is finished your going

fishing. You start to day dream about the big trout you will catch.

The next thing you know Billy is standing beside you with his fishing pole in hand. Billy yells; "I bet I can beat you to the pond!" You both run down the road to Wild Bill pond. You bait your hooks and cast into the ripples. The sun feels good on your body and your glad Billy is there with you.

But before a fish is caught a big thunder cloud rolls over and the sky turn black. Big drops of rain begin to pelt your face. Billy pulls in his line and says; "Come on Kasey, it's going to be pouring rain soon." You pull in your line and gather up your creel and jack knife. You both run to a near by barn.

Just as you enter the barn a loud bolt of thunder crashes through the sky. Your both soaking wet and out of breath. Billy sits down close to you, and you realize he is afraid of the thunder. So you say to him, "It's alright, the storm will be over soon. Let's go up the the loft and pretend we're detectives." Slowly you go up the ladder. Billy is right behind you. You reach the top and pull yourself into the hay. But as Billy reaches the

top the ladder begins to slide. You grab him by the arm and pull with all your strength. Billy is alright, but the ladder crashes to the ground.

The researcher will then say; "I want you to finish the story in your mind and when you are finished open your eyes and return to this room.

After completing the Guided Imagery the students will be given "The New Game" and the researcher will say:

1. "Read this story to find out what happens. When you have finished reading the story turn your paper over."

2. After everyone is finished the teacher will collect the stories and explain the post test in the following way:

   Think about "The New Game" and answer the first question by writing your answer on the blank lines. The story is mainly about_____." When you have completed number one, answer the rest of the questions by underlining your answers. If you need help with a word, raise your hand.

After completing the questions the students will staple their color coded name to the answer sheets and write their name on each answer sheet.

TREATMENT III "THE NEW GAME"

The researcher will say,

1. "What is the title of this story?"
2. "What do you think this story will be about?"
3. "This story is about Kim. Read to find out what happens."
4. "When you have finished reading the story turn your paper over."
5. After everyone is finished the teacher will collect the stories and explain the post test in the following way:

> Think about "The New Game" and answer the first question by writing your answer on the blank lines. The story is mainly about_____. When you have completed number one, answer the rest of the questions by underlining your answer. If you need help with a word, raise your hand.

After completing the questions the students will staple their color coded name tag to the answer sheets, and write their name on each answer sheet.

APPENDIX D - POST-TESTS

THE WELCOME NOTE

Understanding What You've Read

Think about "The Welcome Note"

Underline the best answers.

1. (L) Who is the main character?	(a)	Mrs. Hope
	(b)	Yoshi
	(c)	Fluffy
2.(L) When Yoshi Moved she felt	(a)	lost
	(b)	happy
	(c)	sad
3.(I) Yoshi didn't want to move because she would	(a)	miss her friends
	(b)	miss her school
	(c)	have gotten a kitten
4.(I) Yoshi liked to	(a)	play detective
	(b)	climb trees
	(c)	roller skate
5.(L) Yoshi knew about the lost pet because	(a)	her cat ran away
	(b)	she read a note
	(c)	Mrs. Hope called her

6(L) The note was about	(a)	a lost dog
	(b)	a lost cat
	(c)	a lost rabbit
7.(L) Yoshi wanted to	(a)	find out about the reward
	(b)	roller skate
	(c)	meet a new friend
8.(L) After she read the note Yoshi	(a)	called Mrs. Hope
	(b)	showed the note to her mom
	(c)	skated around the block
9.(I) Mrs. Hope was	(a)	worried about her pet
	(b)	getting a prize
	(c)	looking for her book
10.(L) Yoshi helped Mrs. Hope by	(a)	asking the neighbors to look
	(b)	put up more notes
	(c)	found the lost pet

11.(L) Mrs. Hope and Yoshi	(a)	lived in a little house
	(b)	looked together for Fluffy
	(c)	were surprised to see kittens
12.(L) Yoshi asked Mrs. Hope	(a)	for the reward
	(b)	if she could stay and play
	(c)	help take care of the kittens
13.(L) The reward was	(a)	a fluffy cap
	(b)	a stuffed cat
	(c)	a book about cats
14.(I) When Yoski got a kitten from Mrs. Hope she	(a)	felt unhappy
	(b)	felt brave
	(c)	felt happy
15.(I) Neighbors	(a)	give rewards
	(b)	fix things
	(c)	help each other

RYAN'S PLAN

Understanding What You've Read

Think about "Ryan's Plan"

Underline the best answers.

1.(L) Who is the main character?
- (a) Matt
- (b) Ryan
- (c) Magic Cleaner

2.(L) Ryan did not enjoy
- (a) sharing his bedroom
- (b) going to bed
- (c) a messy bedroom

3.(L) Matt's side of the room was
- (a) neat
- (b) clean
- (c) messy

4.(L) Father sometimes
- (a) picked up after Matt
- (b) asked Matt to clean up his side
- (c) asked Ryan to pick up Matt's side

5.(I) Father was	(a) helpful	
	(b) unfair	
	(c) angry	
6.(L) Ryan wanted Matt to	(a) enjoy a messy room	
	(b) put away his own things	
	(c) give Ryan his bed	
7.(L) Ryan's plan is	(a) to leave the mess	
	(b) to clean up after Matt	
	(c) to show Matt cleaning can be fun	
8.(L) Ryan is pretending to be	(a) a magician	
	(b) a ghost	
	(c) Superman	
9.(L) Ryan tells Matt that a Magic Cleaner	(a) enjoys sleeping	
	(b) makes a mess	
	(c) enjoys cleaning	
10.(I) Matt thinks Magic Cleaner is	(a) a wild vacuum	
	(b) a floating magician	
	(c) scrub bubbles	

11.(L) Magic Cleaner gave Matt	(a) a magic ring (b) a magic wand (c) a magic cape
12.(L) Matt can become Magic Cleaner by	(a) putting on the ring (b) wearing the cape (c) turning off the lights
13.(I) Magic Cleaner is	(a) Matt (b) Ryan (c) anyone who wears the ring
14.(I) Matt wants to be like Magic Cleaner because	(a) he likes a clean bedroom (b) he wants his dad be proud of him (c) he wants to do magic tricks
15.(I) Ryan's plan worked because	(a) Matt was tricked (b) Matt likes magic (c) the ring really works

THE NEW GAME

Understanding What You've Read

Think about "The New Game"

Underline the best answers.

1.(L) Who are the main characters
(a) Kim and May
(b) the Drakes
(c) Mother and Father

2.(I) The Chen family live
(a) in a house
(b) in an apartment
(c) in a mobile home

3.(L) Kim wants to play
(a) Hide and Seek
(b) blocks
(c) I Spy

4.(L) Kim want to play with
(a) Mother
(b) The Drakes
(c) May

5.(I) I Spy is a
(a) guessing game
(b) a board game
(c) a word game

6.(L) The best place to I Spy is
(a) outside
(b) on the floor
(c) by the window

7.(L) The girls couldn't play long because
(a) they were eating at the Drakes
(b) they had to get dressed
(c) it was bedtime

8.(I) The lights went out because
(a) the light bulb burnt out
(b) there was a black out
(c) they hadn't paid their bill

9.(L) Father wondered
(a) how he would get to work
(b) if the girls could still play
(c) if the Drakes still wanted them to come

10.(L) The Chen family could see the stairs with	(a) a flashlight (b) the moon light (c) a candle
11.(L) The Chen family sat on the steps because	(a) the candle went out (b) they got tired (c) they got scared
12.(I) They couldn't play I Spy while sitting on the steps because	(a) they didn't have the game (b) it was dark (c) mother didn't want to play
13.(L) Kim made up a new game called	(a) "I Wish" (b) "I Feel" (c) "I Hear"
14.(L) When they got to the Drakes they	(a) ate dinner (b) played "I Hear" (c) watch T.V.
15.(I) Kim liked to	(a) look out the window (b) visit neighbors (c) play games

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